

Before the
Federal Communications Commission
Washington, D. C. 20554

In the Matter of

The Development of Operational, Technical, and
Spectrum Requirements for Meeting Federal, State,
and Local Public Safety Agency Communications
Requirements Through the Year 2010

WT Docket No. 96-86

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To: The Commission

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COMMENTS OF THE COUNTY OF ORANGE, CALIFORNIA

The County of Orange, California, fully supports the mission and generally supports the findings of the Public Safety Wireless Advisory Committee (PSWAC) on the above captioned matter, and respectfully submits its comments.

1. The County of Orange, California (County), is located between Los Angeles County and San Diego County along the Pacific Ocean, geographically being part of the "Los Angeles basin," and comprises 768 square miles with a population of some 2,650,000 permanent residents and a very large transient population, with its many business and industrial activities, beaches and recreational areas, Disneyland, Knott's Berry Farm, Anaheim Stadium (home of the Angels), Anaheim Arena or "Pond" (home of the Mighty Ducks), and major convention centers, including those in Anaheim and at the Disneyland Hotel.
2. Orange County currently operates its joint County-City Coordinated Public Safety Communications Systems, having done so since 1934. These operations range in frequency throughout the 30 to the 900 MHz frequency bands, with a current project to bring virtually all of these local governmental activities to the 800 MHz band to enhance interoperability among the County's departments and agencies, thirty-one incorporated cities, and many special districts, for both day-to-day and disaster-related activities such as the recent Laguna Beach fire.
3. Orange County applauds the Commission and the NTIA for sponsoring this crucial PSWAC undertaking. The County has supported the PSWAC process through its representatives attending Steering and Subcommittee meetings since September of 1995, as well as participating in and contributing to the work of the Subcommittees and their various working groups.

INTEROPERABILITY

4. The County fully supports the definitions of Public Safety and of Interoperability which were developed through the PSWAC process. These are seen as being inclusive of the entire spectrum of Federal, state, and local Public Safety agencies protecting the nation's health and welfare.

OHY

5. The County does not believe that there will ever be enough spectrum set aside for use by all levels of this nation's Public Safety agencies within a single frequency band which is appropriate for all areas of the nation (e.g., mountains, desert, and metropolitan areas). Therefore, it appears that it will never be possible, and probably not desirable, to migrate all Public Safety wireless operations into a single frequency band. Even if such a large amount of appropriate spectrum were designated for Public Safety use, it is unlikely that there would be sufficient funding available to effect such a migration. This leads to the recognition that more than one frequency band will perhaps always be utilized by the nation's Public Safety agencies.
6. Orange County does believe that there simply must be minimum baseline interoperability standards. For today, the old standby of analog FM is seen as the only practicable baseline standard, the the County supports this approach. However, the County also believes that digital modulation techniques will be emphasized in the future and, therefore, fully supports beginning the development of minimum baseline digital interoperability standards at the earliest possible time.

OPERATIONAL

7. The operational requirements for wireless applications of technology by Public Safety agencies will continue to grow. While voice communications are anticipated to continue to be the most important mission-critical wireless need, the biggest growth will be in the non-voice areas, including digital data, vehicle location, and mobile video and imaging. NCIC 2000 is but one example of the near-term requirements recognized by the County.
8. Orange County has provided joint-operation Public Safety wireless communications for over sixty years, having firmly demonstrated the effectiveness of such systems. However, the County also recognizes and respects the fact that each Public Safety agency must have the freedom to develop the system that meets its needs and that it can afford, whether cooperatively with other Public Safety agencies or on its own, and must not be forced into shared systems merely for the sake of sharing. This is seen as both political and economic reality in the United States.

TECHNOLOGY

9. The County believes that there will be valid Public Safety applications for each of the technologies cited in this Docket: TDMA, CDMA, FDMA, and ACSSB (or linear modulation), each with its own advantages and disadvantages for any particular technology application. Perhaps the key question is not the particular technology but, rather, the development of standards to assure interoperability.
10. Believing in interoperability standards and the need for multiple-vendor sourcing of wireless systems and equipment for its Public Safety agencies, Orange County has supported and has participated through its representatives in the APCO Project 25 process since its inception in 1989. The County believes that this unique, user-driven standards

process, and other user-driven which are similar in their development, are the only way to assure that the needs of the Public Safety user community are truly reflected in the standards--not merely what is most convenient for the manufacturing interests. The development of Public Safety standards requires the participation of all interests, including manufacturing interests, as was the case with the APCO Project 25 process, but a user-driven process is absolutely essential to the success of such a process for the wireless systems and equipment which supports the nation's Public Safety agencies at all levels.

11. The County would welcome the Commission's implementation of receiver standards, which are believed to be long overdue. This is especially critical to the effective utilization of the scarce and valuable Public Safety spectrum in and near the nation's major metropolitan areas, such as here in Orange County, California.
12. Orange County had hoped to see some spectrum relief from the Commission's recent "refarming" proceeding, but was disappointed to see that no date-certain provisions were included in the Report and Order. While the County saw the Commission's original proposal to require as much as perhaps two complete system change-outs within an eight-year time frame in the Los Angeles metropolitan area, "never" having to change is certainly not a blessing--even in disguise. Control of equipment bandwidth only through the type acceptance process while allowing the continued use and sale of currently-type accepted equipment for an indefinite period, as well as that of new dual- or multi-mode equipment, is not seen by Orange County as any relief whatsoever. The County urges the Commission to set a reasonable date-certain for "refarming" conversion or a mandatory reversion to secondary status.

SPECTRUM

13. The spectrum requirements identified by the PSWAC Spectrum Requirements Subcommittee are supported by the County. While providing the additional spectrum identified therein will be neither easy nor painless, it is an absolute necessity for the Federal, state, and local Public Safety agencies to perform their daily work in protecting the health and safety of the nation's residents, let alone prepare them for response to the many disasters which will occur through the year 2010.
14. Of particular interest to the County is the spectrum currently assigned to television channels 60-69. This spectrum is adjacent to the current 800 MHz spectrum allocated to state and local Public Safety agencies on a shared or exclusive basis. This spectrum could be utilized to expand the existing 800 MHz Public Safety wireless systems which have already exhausted the available spectrum in and near the major metropolitan areas of the nation, and could support many of the new technologies these agencies need now and through the year 2010. It is recognized, however, that this spectrum may not be available in the near-term in many areas of the nation, but would certainly be a long-term spectrum resource to consider.
15. Another source of compatible 800 MHz spectrum identified by Orange County is the so-called "General Access Pool" which consists of the first 150

channels in the current 800 MHz band. Orange County understands that there is serious consideration being given at the present time to the reclaiming of these channels for future spectrum auctions to benefit the United States Treasury; however, Orange County strongly believes that the public interest, convenience, and necessity would be better served by the reallocation of these channels for the exclusive use of Public Safety agencies. Wireless systems and equipment are already developed for this band, and this would allow the Federal Public Safety agencies access to spectrum to develop 800 MHz systems which are interoperable with those in use by state and local Public Safety agencies, noting that there is currently no spectrum allocated for Federal use in the 800 MHz frequency band.

16. As previously mentioned, no single frequency band is seen by the County as appropriate for all regions and applications. Another resource for spectrum for Public Safety would be some or all of the spectrum currently allocated to television channels 7-13. The Commission's digital television proceeding will make major revisions to today's television spectrum utilization. This spectrum is immediately adjacent to the spectrum which provides the majority of the Federal, state and local Public Safety agencies, particularly those wide-area and rural systems, and equipment for this band would be anticipated to be available in the very short term. It is recognized, however, that this spectrum may not be available in the near-term in many areas of the nation, but would certainly be another long-term spectrum resource to consider.
17. There has also been a great deal of discussion concerning the potential reallocation of spectrum in the 380-400 MHz frequency band. While consideration could be given to this spectrum, adjacent to current Federal and non-Federal Public Safety frequency allocations and where equipment development should not be a major effort, Orange County does not believe that it is in a position to do more than suggest that cognizant Federal authorities give this spectrum appropriate consideration. The requirements of the current military users must also be considered.
18. Orange County firmly believes that additional spectrum in the microwave bands is also needed to support Public Safety agency operations, and supports the findings of the Spectrum Requirements Subcommittee as far as they go. The County believes that this requirement is most probably even understated in the PSWAC report. Point-to-Point and point-to-multipoint microwave is now and will continue to be required to support many Federal and non-Federal Public Safety agencies through the year 2010. Today, Federal Public Safety users are believed to have several exclusive Federal microwave bands, while state and local Public Safety agencies utilize microwave spectrum which is shared with nearly all other non-Federal users. Perhaps this sharing results in good spectrum usage. However, with the recent reallocations of the 2 GHz band away from Public Safety and other non-Federal users for PCS use, together with the previous loss of the 12 GHz microwave band to direct broadcast satellite use, the spectrum available to non-Federal Public Safety agencies is woefully inadequate in and near major metropolitan areas. The Federal Public Safety users are also similarly affected by the recent reallocations of 200 MHz of microwave spectrum to non-Federal uses for emerging technologies. Perhaps additional shared spectrum would be

adequate to serve the overall Public Safety needs, but the County would defer comments on this decision to those Federal Public Safety agencies which will be providing comments in this Docket proceeding.

19. Orange County and its incorporated cities today make extensive use of commercial wireless telecommunications services. The use of cellular telephones serves Public Safety agencies well in satisfying the need to communicate through the public switched telephone network (PSTN). Since spectrum is so scarce in this area, virtually no PSTN "interconnect" is conducted over the County's land mobile spectrum. PCS systems are seen to be able to provide similar service capabilities in the near future in this area. Unfortunately, not all areas of the nation will have the opportunity to utilize many of these newer services for some time--if ever. Nevertheless, the County does not see that the use of commercial services can ever effectively replace County-owned and operated systems entirely for mission-critical wireless communications services, where the coverage and reliability are not under the control of the County.
20. The County also utilizes commercial non-wireless telecommunications services extensively, such as leased voice and data circuits extensively, but does not see that these services will ever replace the requirement for microwave owner and operated by the County for the same reasons which are cited above in paragraph 18.

TRANSITION

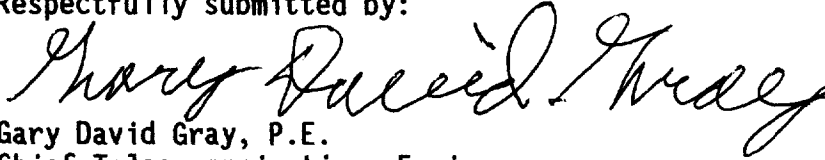
21. Orange County believes that the biggest obstacle to any transition to new spectrum or even to additional, non-compatible spectrum to support the required interoperability sought in this Docket proceeding will be that of funding. There surely won't be enough funding available from the auctioning of spectrum resources to fund transition of all of the Federal and non-Federal Public Safety agencies to new bands, and probably won't be enough to even cover the wireless infrastructure and individual user wireless units for interoperability purposes alone. This is especially true in light of the recent moves to balance the entire Federal deficit based on spectrum sales, which is patently contrary to the mission of the PSWAC process.

SUMMARY

22. In conclusion, the County believes that additional spectrum is definitely required for the nation's Federal, state, and local Public Safety agencies today, and this current shortfall will be magnified in the near future and certainly by the year 2010. Orange County urges the Commission and the NTIA to allocate appropriate and usable spectrum sufficient to accommodate existing advanced Public Safety land mobile and fixed (microwave) wireless communications services through the year 2010.
23. The County further urges the Commission to establish a reasonable date-certain for conversion to the narrower channels envisioned in its "refarming" process, or mandatory reversion to secondary status, so that this valuable spectrum resource may be realized. The current "refarming" rules are seen as being both ineffective and impractical.

24. Finally, the County urges the Commission and the NTIA to immediately initiate the process to develop minimum baseline digital interoperability standards.

Respectfully submitted by:

A handwritten signature in black ink, appearing to read "Gary David Gray". The signature is fluid and cursive, with the first name "Gary" being the most prominent.

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October 9, 1996